The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRANK P. HART and DON J. NGUYEN

Appeal No. 2003-0782
Application 09/275,273

ON BRIEF

Before JERRY SMITH, RUGGIERO and DIXON, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-18, which constitute all the claims in the application.

The disclosed invention pertains to the art of using multiple voltage regulators in combination with a single load.

Representative claim 1 is reproduced as follows:

1. A circuit comprising:

a primary voltage regulator coupled to an electrical load and to a power supply to provide a first amount of power, the primary voltage regulator to detect power supplied to the electrical load and to control one or more additional voltage regulators; and

a secondary voltage regulator coupled to the electrical load, to the power supply, and to the primary voltage regulator, the secondary voltage regulator to provide a second amount of power, the secondary voltage regulator to provide a signal to the primary voltage regulator to indicate whether the secondary voltage regulator is enabled.

The examiner relies on the following references:

Biamonte et al. (Biamonte)	4,766,364	Aug. 23, 1988
Tracy	6,191,943	Feb. 20, 2001 (filed Nov. 12, 1998)
Burstein et al. (Burstein)	6,268,716	July 31, 2001 (filed Oct. 30, 1998)

Claims 1-18 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Biamonte in view of Burstein with respect to claims 1-7 and 10-18, and Tracy is added to this combination with respect to claims 8 and 9.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-18. Accordingly, we affirm.

Appellants have indicated that for purposes of this appeal the claims will all stand or fall together as a single group [brief, page 5]. Consistent with this indication appellants have made no separate arguments with respect to any of the claims on appeal. Accordingly, all the claims before us will stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989,

991, 217 USPQ 1, 3 (Fed. Cir. 1983). Therefore, we will consider the rejection against independent claim 1 as representative of all the claims on appeal.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an

essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR § 1.192(a)].

With respect to representative, independent claim 1, the examiner essentially finds that Biamonte teaches the invention of claim 1 except that Biamonte does not teach the secondary voltage regulator providing a signal to the primary voltage regulator indicating that the secondary voltage regulator is enabled. The examiner cites Burstein as teaching sending status information from a secondary voltage regulator to a primary voltage

regulator. The examiner finds that it would have been obvious to the artisan to send status information in Biamonte in the manner taught by Burstein. The examiner takes Official Notice that an indication of whether a device is enabled is important status information, and therefore, it would have been obvious to the artisan to send such information [answer, pages 3-4].

With respect to claim 1, appellants note that the claimed invention includes the limitation of a secondary voltage regulator coupled to a primary voltage regulator, where the secondary voltage regulator provides a signal to the primary voltage regulator to indicate whether the secondary voltage regulator is enabled. Appellants argue that the feedback signal in Burstein represents the current passing through the switching circuit, and Burstein does not disclose, teach or suggest the secondary voltage regulator providing a signal to the primary voltage regulator to indicate whether the secondary voltage regulator is enabled. Appellants assert that none of the applied references teach this feature of the invention. Appellants argue that there is no motivation to combine the teachings of the applied prior art. Appellants argue that the combination proposed by the examiner is based on nothing but hindsight [brief, pages 8-13].

The examiner responds by repeating his position that it would have been obvious to include whether the device is enabled because such information was known to be an important piece of information and this would have provided greater control and accuracy in current regulation. The examiner notes that the current through the secondary regulator would be zero unless the secondary regulator is enabled [answer, pages 6-9].

Appellants respond that providing whether the secondary regulator is enabled is not important feedback information in Burstein because Burstein needs to know the amount of current that is flowing through the switching circuit in order to regulate current control. Appellants dispute the examiner's position that providing a signal indicating whether the second regulator is enabled provides greater control and accuracy in current regulation [reply brief].

We will sustain the examiner's rejection of claims 1-18. Appellants' argument that neither reference teaches the secondary voltage regulator providing a signal to the primary voltage regulator to indicate whether the secondary voltage regulator is enabled is not correct because it fails to consider all the teachings of the applied prior art. The examiner relied on

Burstein as sending status signals from the secondary voltage regulator to the primary voltage regulator. In addition to sending current signals from the secondary regulator to the primary regulator as argued by appellants, Burstein also discloses the following:

> The slaves may also include an [sic] fault protection circuit 68 .... If the fault protection circuit 68 is activated, the slave may send a digital signal on a current limit lines [sic] 44i (see FIG. 3A) to inform the master controller 18' that the slave has been deactivated [column 9, lines 30-37].

Thus, Burstein specifically discloses that the slave or secondary voltage regulators send a signal to the primary voltage regulator to indicate that the secondary regulator has been deactivated. While this signal might be considered as a "not enabled" signal, the disclosure of such a signal would be understood by the artisan as representing an "enabled" signal as well. That is, lack of the deactivated signal in Burstein represents that the secondary voltage regulator is enabled.

Biamonte also teaches that the failure of a slave regulator is detected by the master regulator to shift the load current in an appropriate manner [column 4, lines 6-14]. Thus, Biamonte also teaches that the master regulator needs to be informed of the fact that one of the secondary regulators has

failed or, in other words, becomes deactivated. Since both Biamonte and Burstein teach the desirability of sending a deactivated signal from the secondary regulator to the primary regulator, and since the sending of a deactivated signal would also suggest the sending of an enabled signal to the artisan, it would have been obvious to the artisan to employ an enabled signal in a voltage regulator system as taught by either Biamonte or Burstein. Although we have cited portions of the applied prior art which have not been specifically discussed by the examiner or by appellants, appellants are responsible for considering all the teachings of the applied prior art.

In summary, we have sustained the examiner's rejection of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1-18 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

JERRY SMITH)
Administrative Patent Judge)
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JOSEPH F. RUGGIERO) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
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JOSEPH L. DIXON)
Administrative Patent Judge)

JS/dym

Paul A. Mendonsa
Blakely, Sokoloff, Taylor & Zafman
12400 Wilshire Boulevard 7th Floor
Los Angeles, CA 90025